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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,668	02/01/2000	Sergey A. Selifonov	3271.002US1	5158
22434	7590	05/11/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778			KIM, YOUNG J	
			ART UNIT	PAPER NUMBER

1637

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,668

Applicant(s)

SELIFONOV ET AL.

Examiner

Young J. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10,12-23,25,27-30,45,47-49 and 51-179 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,10,12,14-20,25,29,30,47-49,51-53,56-65,90-93,96-106,109-143 and 156-179 is/are allowed.
- 6) ☒ Claim(s) 7,8,13,21-23,27,28,45,54,55,66-89,94,95,107,108 and 144-155 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/14/03 & 1/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on August 4, 2003 has been entered.

Preliminary Remark

It is noted that Applicants have not complied with the objection to the drawings initially held in the Office Action mailed on August 25, 2000 (attached PTO-948), and in the Notice of Allowability, reminding the Applicants to comply. Hence, the objection is maintained and Applicants are referred to the PTO-948 which was attached to the previous Office Action mailed on August 25, 2000.

Claims 1-8, 12-23, 25, 27-30, 45, 47-49, and 51-179 are pending.

Priority

The Office acknowledges the Amendment received on September 27, 2001, amending the first line of the specification to claim benefit under 35 U.S.C. 119(e) and 120. Applicants are advised that some of the cited applications have now been abandoned. Applicants are requested to amend the specification to update the status of each application in their response.

Finally, the earliest effective filing date of the instant application has been determined to be **October 12, 1999**, from U.S. 09/416,837, now abandoned. Applications filed after said date

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fail to provide the proper support under 35 U.S.C. 112, first paragraph. Said Applications fail to provide support for encoding two or more biological molecules into a data structure of initial character strings to, wherein two substrings are selected therefrom, followed by their concatenation.

Sequence Rules

This application contains sequence disclosures that are encompassed by the definition for nucleotide and/or amino acid sequences set for in 37 CFR 1.82(a)(1) and (a)(2). Applicants have been advised in the previous Office Action mailed on August 25, 2000. The Applicants, however, fails to comply with the requirement of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotides Sequences And/Or Amino Acid Sequence Disclosures and the CRF Error Report.

A fully responsive communication MUST fulfill the sequence rules.

Information Disclosure Statement

The Office acknowledges the IDS received on October 14, 2003 and January 12, 2004. The signed copies of their corresponding PTO-1449 are attached hereto.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 8, 13, 21-23, 27, 28, 45, 54, 55, 66-89, 94, 95, 107, 108, and 144-155 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 is indefinite for the recitation of the phrase, "selecting at least one substrings from an initial character string such that the *ends of said substring* occur in string regions," because it is unclear whether the word, "ends" denotes the last character of the substring or a region comprising the last character of the substring. For the purpose of prosecution, the former interpretation is assumed. Claims 8, 22, 23, 69, 70, 81, 82, 94, 95, 107, and 108, are indefinite for the same reason as set forth above.

Claim 13 is indefinite for the recitation of the phrase, "altering one or more occurrences of a particular preselected character in *said character strings*," because it is unclear whether the limitation, "said character strings" is referring to the initial character strings, or the selected substrings, or the produced product strings. Claims 27 and 28 are indefinite for the same reason.

Claim 21 is indefinite for the recitation of the phrase, "initial character strings have at least 30% sequence identity," because it is unclear to what the homology is compared against.

Claim 45 is indefinite for the recitation of the term, "related," because it is unclear what is inferred by this term. For example, it is unclear whether the character strings are related in that it comprises a requisite degree of homology, from same genus, same species, same sequences, etc.

Claims 54 and 55 are indefinite because said claims are drawn to a product, not a method, thus it becomes unclear how a product can conduct the physical method of making a product on an array of vessels or in an assembly of oligonucleotides.

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Claims 66 (its dependent claims 67-77 and 144-149) and 78 and its dependent claims 79-89 and 150-155) are indefinite for the recitation of the step, "providing an alignment of the product strings," because it is unclear whether the product strings are aligned against other product strings, or the initial strings, or the substrings, etc. rendering the claims indefinite in its metes and bounds.

Double Patenting – duplicate claims

Claim 18 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 19. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims are duplicates of each other.

Inquiries

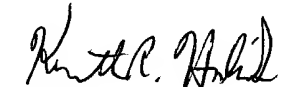
Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Young J. Kim whose telephone number is (571) 272-0785. The Examiner can normally be reached from 8:30 a.m. to 6:00 p.m. Monday through Thursday. If attempts to reach the Examiner by telephone are unsuccessful, the Primary Examiner in charge of the prosecution, Dr. Kenneth Horlick, can be reached at (571) 272-0784. If the attempts to reach the above Examiners are unsuccessful, the Examiner's supervisor, Gary Benzion, can be reached at (571) 272-0782. Papers related to this application may be submitted to Art Unit 1637 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If applicant does submit a paper by FAX, the original copy should

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be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office. All official documents must be sent to the Official Tech Center Fax number: (703) 872-9306. For Unofficial documents, faxes can be sent directly to the Examiner at (517) 273-0785. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-0507.



Young J. Kim
Patent Examiner
Art Unit 1637
5/5/04



KENNETH R. HORLICK, PH.D
PRIMARY EXAMINER

5/6/04